



Product news

Automotive-Compliant Buck LED Drivers from Diodes Incorporated Provide Simple, Robust Solutions for Internal and Exterior LED Lamps

Plano, Texas – December 18, 2019 Diodes Incorporated (Nasdaq: DIOD) today announced the [AL8843Q](#) and [AL8862Q](#) automotive-compliant DC-DC buck converters, designed for driving single LEDs and multiple LED strings in and around vehicles. Applications include daytime running lights (DRL), which many manufacturers now offer as standard, as well as fog lights, turn lights, and brake/stop lights.

With a supply voltage from 4.5V and to at least 40V (AL8862Q up to 55V), the AL8843Q and AL8862Q can withstand even severe voltage variations, such as load dumps during low cranking or stop-start operation, without suffering any corresponding degradation in the LED drive current.

A high level of integration delivers high performance while minimizing the bill of materials. Both parts feature an integrated power MOSFET: 40V/0.2Ω for the AL8843Q and 55V/0.4Ω for the AL8862Q. Additionally, the devices feature hysteretic-mode buck LED driver control, which simplifies the feedback loop enabling engineers to realize highly stable buck converter designs using just four external components.

Differentiating features for the AL8843Q include an input voltage range of 4.5V to 40V and 3A output current, while the AL8862Q can operate at between 5V and 55V input voltage, delivering up to 1A at the output. Both parts support full scale (0% to 100%) PWM dimming, controlled with either an analog input between 0.4V and 2.5V or a PWM signal generated by an external microcontroller or host processor. Safety features include overtemperature protection as well as LED short- and open-circuit protection. The AL8862Q incorporates an open-drain fault indication pin, which is asserted low to report faulty conditions.

The AL8843Q and AL8862Q in SO-8EP are qualified to AEC-Q100 Grade 1, support PPAP documents, and are manufactured in IATF16949 certified facilities.

Further information is available at www.diodes.com.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog, and mixed-signal semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, function-specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors, power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes also has timing, connectivity, switching, and signal integrity solutions for high-speed signals. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas and Milpitas, California. Design, marketing, and engineering centers are located in Plano; Milpitas; Taipei, Taiwan; Taoyuan City, Taiwan; Zhubei City, Taiwan; Manchester, UK; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Manchester and Greenock, UK, and Shanghai, China. Diodes has assembly and test facilities located in Shanghai, Jinan, Chengdu, and Yangzhou, China, as well as in Hong Kong, Neuhaus, and Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; Munich, Germany; and Tokyo, Japan, with support offices throughout the world.

Recent news releases, annual reports and SEC filings are available at the Company's website: <http://www.diodes.com>. Written requests may be sent directly to the Company, or they may be e-mailed to: diodes-fin@diodes.com.

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